UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,677	04/14/2004	Dai Sato	251854US6	4881

22850   7590   07/29/2008
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EXAMINER
RICE, ELISA M

ART UNIT	PAPER NUMBER
2624	

NOTIFICATION DATE	DELIVERY MODE
07/29/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)
Office Action Summary	10/823,677	SATO, DAI
	Examiner	Art Unit	
	ELISA M. RICE	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 March 2008*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-27* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

The amendment filed on March 13, 2008 was received and entered. Claims 1-27 are

currently pending.

Response to Arguments

Applicant's arguments, see Remarks/Arguments, filed on 3/13/2008, with respect

to the rejection of claims 1, 13, and 25 under Nakamura et al. (US 2002/0181738 A1)

have been fully considered and are persuasive. Therefore, the rejection has been

withdrawn. However, upon further consideration, a new ground of rejection is made in

view of Wang et al. (US 6,526,155 B1). The Nakamura reference does not explicitly

disclose that the embedding information to be embedded in the input image consists of

image information data specifically. Examiner, therefore, has applied Wang et al. (US

6,526,155 B1) to teach embedding a visible **image** watermark into the input image.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-27 are rejected under 35 U.S.C. 103(a) as being anticipated by Nakamura et al. (US 2002/0181738 A1), in view of Wang et al. (US 6,526,155 B1).

Regarding claims 1, 13, and 26, Nakamura discloses an image processing apparatus in which an input image information data which is an image information data contained in an input image signal is synthesized with a synthesizing information data which is information data different from the input image information data, the image processing apparatus comprising:

synthesis control means for controlling synthesis of the input image information data and the plurality of the input synthesizing information data, for every arbitrary area of the input image corresponding to the input image information data (Nakamura, Fig. 9, "Digital-Watermark-Pattern Generating Key Storage Unit", num. 1603; Nakamura, "The digital-watermark-pattern generating key specifically includes picture-division information for use in embedding of digital watermark patterns, and bit-arrangement information, and is the process information required for generating the embedding information as the digital watermark patterns.", paragraph 52);

and image information data synthesis means for synthesizing the input image

information data and the synthesizing information data according to the control by

means of the synthesis control means (Fig. 9, "Digital Watermark Pattern Embedding

Unit", num 1605, In summary, the digital-watermark-pattern embedding unit 1605

embeds, in an original picture 1601, the digital watermark patterns generated by the

digital-watermark-pattern generating unit 1604" under the control of the digital

watermark pattern generating key supplied from the Digital Watermark Pattern

Generating Storage Unit 1603 as described in Nakamura, paragraph 53).

Nakamura does not explicitly disclose that the synthesizing information data is

synthesizing image information data (which is an image information data) and

synthesizing image information data holding means for holding a plurality of the

synthesizing image information data;

Wang teaches a synthesizing image information data which is an image information

data in the form of a visible watermark (Wang, "This invention provides systems and

methods for embedding visible watermarks in images or documents.", column 1, lines

46-47; Wang, "Examples of visible watermarks are the commonly-seen copyright logos

or symbols that are generally affixed to the work before sales or distribution.", column 1,

lines 16-18) and a synthesizing image information data holding means for holding a

plurality of the synthesizing image information data (Wang, "In particular, a user selects,

via the user input device 310, a watermark stored in the watermark storage device

240.", column 3, lines 65-67).

The Nakamura and Wang reference are both in the same field of endeavor of

watermark embedding. It, therefore, would have been obvious to one of ordinary skill in

the art at the time of the invention to modify the watermarking embedding system of

Nakamura to include synthesizing information which is image information data as taught

by Wang because "the watermark is visually apparent within the output image and is

very difficult to remove" (Wang, column 1, lines 66-67). It also would have been obvious

to one of ordinary skill in the art at the time of the invention to modify the watermarking

embedding system of Nakamura to include a synthesizing image information data

holding means for holding a plurality of the synthesizing image information data as

taught by Wang to provide storage for a variety of embedding information to allow a

user to select "a watermark stored in the watermark storage device" (Wang, column 3,

lines 65-67).

Regarding claims 2 and 14, the combination of Nakamura and Wang discloses the

image processing apparatus as4recited in claim 1, wherein: the synthesizing image

holding means holds the synthesizing image information data as a data on a pixel-by-

pixel basis (Wang, Fig. 2, num. 240: "Watermark Storage Device")

Regarding claims 3 and 15, the combination of Nakamura and Wang discloses the image processing apparatus as recited in claim 1, wherein: the synthesizing image holding means holds information data obtained by arranging the synthesizing image information data in a table (Nakamura, paragraph 47; Fig. 7).

Regarding claims 4 and 16, the combination of Nakamura and Wang discloses the image processing apparatus as recited in claim 1, wherein: the synthesis control means includes control information data holding means for holding control information data about control of synthesis of the synthesizing image information data and the input image information data, so as to control the synthesis of the synthesizing image information data and the input image information data according to the control information data held in the control information data holding means (Nakamura, paragraph 57).

Regarding claims 5 and 17, the combination of Nakamura and Wang discloses the image processing apparatus as recited in claim 4, wherein: the control information data is an information data for specifying, in the arbitrary area, the synthesizing image information data corresponding to a synthesizing image to be superimposed on the input image by selecting it from the plurality of synthesizing image information data held in the synthesizing image information data holding means, based on the control information data (Nakamura, paragraph 46; Fig. 6), the synthesis control means determines whether or not each of the plurality of synthesizing image information data

held in the synthesizing image information data holding means is synthesized with the

input image information data ("uses a combination of the patterns to represent desired

information", Nakamura, paragraph 46), such that the synthesizing image information

data which has been determined to be synthesized is controlled to be synthesized with

the input image information data, and based on the control by means of the synthesis

control means, the image information data synthesis means synthesizes the input

image information data and the synthesizing image information data so as to

superimpose the input image on the synthesizing image in the arbitrary area (Fig. 9,

num 1605).

Regarding claims 6 and 18, the combination of Nakamura and Wang discloses the

image processing apparatus as recited in claim 4, wherein: the control information data

is an information data for specifying the synthesizing ratio of each image information

data in the arbitrary area, when mixing the input image with the synthesizing image

corresponding to the plurality of synthesizing image information data held in the

synthesizing image information data holding means, based on the control information

data ("intensity of embedding the digital watermark pattern (synthesizing ratio) in the

edge and flat parts of the original picture 2601 (in the arbitrary area) is adjusted by the

digital-watermark-pattern embedding unit 2607" based on the watermark pattern

generating key control information, Nakamura, paragraph 180), the synthesis control

means controls the plurality of synthesizing image information data held at the

synthesizing image information data holding means so as to be synthesized with the

input image information data at the specified synthesizing ratio, and based on the control by means of the synthesis control means, the image information data synthesis means synthesizes the input image information data and the synthesizing image information data so as to mix the input image and the synthesizing image at the specified synthesizing ratio in the arbitrary area (Nakamura, paragraph 180; Fig 26).

Regarding claims 7 and 19, the combination of Nakamura and Wang discloses the image processing apparatus as recited in claim 4, wherein: the synthesis control means further includes, in the arbitrary area, graphics determination means for determining whether or not graphics exist in the synthesizing image corresponding to the synthesizing image information data synthesized with the input image information data (Nakamura, Fig. 28, num. 2807), and when it is determined that there are not graphics by way of the determination through the graphics determination means, the synthesis control means controls the synthesizing image information data so as not to be synthesized with the input image information data (Nakamura, paragraph 192-when the data-hiding steganographic watermark is not present, no action need be taken with respect to applying the synthesizing image information data to the input image information data).

Regarding claims 8 and 20, the combination of Nakamura and Wang discloses the image processing apparatus as recited in claim 4, wherein: an amount of data of the control information data is smaller than an amount of data of the synthesizing image

information data held in the synthesizing image information data holding means

(Nakamura, paragraph 7).

Regarding claims 9 and 21, the combination of Nakamura and Wang discloses image

processing apparatus as recited in claim 4, wherein: the control information data is

information data on a pixel-by-pixel basis (paragraph 56; Fig. 10, num. 1702; Fig. 9,

num. 1603).

Regarding claims 10 and 22, the combination of Nakamura and Wang discloses the

image processing apparatus as recited in claim 4, wherein: the control information data

is an information data obtained by arranging transition points where control changes, in

a table (Nakamura, Fig. 17; paragraph 129, 130, 131).

Regarding claims 11 and 23, the combination of Nakamura and Wang discloses the

image processing apparatus as recited in claim 1, further including: address information

data generation means for generating the address information data which indicates a

location in a screen for the input image, wherein based on the address information data

generated by the address information data generation means, the synthesis control

means controls the synthesis of the input image information data and the plurality of

synthesizing image information data held in the synthesizing image information data

holding means such that synthesis locations of the synthesizing image information data

and the input image information data may be positioned properly (Nakamura, "a.sub.0.,

j-2", Fig. 7; b.sub.0., Fig. 8).

Regarding claims 12 and 24, the combination of Nakamura and Wang discloses the

image processing apparatus as recited in claim 11, further including: synchronizing

signal separation means for separating a synchronizing signal added to the input image

information data, wherein the address information data generation means generates the

address information data, based on the synchronizing signal separated from the input

image information data by the synchronizing signal separation means (Nakamura, Fig. 7

- this information is gleaned from the input image by extraction of embedded information

in the input image information data (i.e. original picture)).

Regarding claim 25 and 27, Nakamura discloses the imaging apparatus including: an

imaging means for imaging a photographic subject and capturing an taken image

information data which is an acquired image information data(Nakamura, "The types of

an original picture 2601 include various pictures in which digital watermark patterns are

embedded, such as pictures read from a storage medium such as a hard disk or a DVD,

or a picture supplied from a picture capturing unit such as a scanner or a digital

camera.", paragraph 172);

 a synthesis control means for controlling synthesis of the taken image information data

and the plurality of synthesizing image information data which are held in the

synthesizing image information data holding means, for every arbitrary area of the taken

image corresponding to the taken image information data (Nakamura, Fig. 26, num.

2603; Nakamura, "The digital-watermark-pattern generating key specifically includes

picture-division information for use in embedding of digital watermark patterns, and bit-

arrangement information, and is the process information required for generating the

embedding information as the digital watermark patterns.", paragraph 52);

and an image information data synthesis means for synthesizing the taken image

information data and the synthesizing image information data according to control by

means of the synthesis control means (Nakamura, Fig. 26, num. 260, Nakamura, In

summary, the digital-watermark-pattern embedding unit 1605 embeds, in an original

picture 1601, the digital watermark patterns generated by the digital-watermark-pattern

generating unit 1604" under the control of the digital watermark pattern generating key

supplied from the Digital Watermark Pattern Generating Storage Unit 1603 as described

in Nakamura, paragraph 53).

Nakamura does not explicitly disclose that the synthesizing information data is

synthesizing image information data (which is an image information data) and

synthesizing image information data holding means for holding a plurality of the

synthesizing image information data;

Wang teaches a synthesizing image information data which is an image information data in the form of a visible watermark (Wang, "This invention provides systems and methods for embedding visible watermarks in images or documents.", column 1, lines 46-47; Wang, "Examples of visible watermarks are the commonly-seen copyright logos or symbols that are generally affixed to the work before sales or distribution.", column 1, lines 16-18) and a synthesizing image information data holding means for holding a plurality of the synthesizing image information data (Wang, "In particular, a user selects, via the user input device 310, a watermark stored in the watermark storage device 240.", column 3, lines 65-67).

The Nakamura and Wang reference are both in the same field of endeavor of watermark embedding. It, therefore, would have been obvious to one of ordinary skill in the art at the time of the invention to modify the watermarking embedding system of Nakamura to include synthesizing information which is image information data as taught by Wang because "the watermark is visually apparent within the output image and is very difficult to remove" (Wang, column 1, lines 66-67). It also would have been obvious to one of ordinary skill in the art at the time of the invention to modify the watermarking embedding system of Nakamura to include a synthesizing image information data holding means for holding a plurality of the synthesizing image information data as taught by Wang to provide storage for a variety of embedding information to allow a user to select "a watermark stored in the watermark storage device" (Wang, column 3, lines 65-67).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELISA M. RICE whose telephone number is (571)270-1582. The examiner can normally be reached on 12:00-8:30p.m. EST Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on (571)272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Elisa M Rice/
Examiner, Art Unit 2624

/Vikkram Bali/
Supervisory Patent Examiner, Art Unit 2624